REMARKS

Reconsideration and allowance are respectfully requested.

The rejection of claims 51-55 under 35 U.S.C. §112 and the objection to claim 55 are moot because those claims are canceled.

All claims stand rejected under 35 U.S.C. §103 as allegedly being unpatentable based on Previously Presentedly-applied Kennedy in view of Redi. This rejection is respectfully traversed.

The claims in this case relate to link quality in the context of a network including a plurality of infrastructure nodes. Example link quality parameters recited in dependent claims include Doppler spread, average fading duration, coherence time, variational speed, radio signal quality, bit error, etc., see, e.g., claim 7. Energy conservation and link quality look at network routing from different perspectives. By focusing on link quality, as opposed to using the most energy-efficient link, a more reliable communication link is provided from source to target, thereby reducing the risk of lost packets, the need for packet retransmission, and the burden on the network capacity. A predictive algorithm operates on information relating to time varying properties of the link quality parameter(s) for determining an actual route path.

Newly-cited Kennedy describes a mobile ad hoc network with wireless mobile nodes and wireless communication links connecting the nodes together. Route discovery and maintenance in the network is controlled by transmitting beacon signals from each mobile node, determining a node or group condition at each mobile node, and varying the beacon signals based upon the determined node/group condition. Route tables are built and updated at each mobile node with a first one of proactive and reactive route discovery processes to define routes in the network. The beacon signals are received and node/group condition information is stored at each node. Route

stability over time is predicted based upon the node/group condition information, and when predicted route stability reaches a first transition parameter the method switches to a second one of the proactive and reactive route discovery processes. Redi was described and successfully distinguished in the first response.

Claim 1 recites "link monitoring circuitry for acquiring link quality information indicating link status between said infrastructure nodes" and "electronic processing circuitry for using said link quality information in a route path determination process in the infrastructure nodes using a predictive procedure." The Examiner admits at the bottom of page 4 that Kennedy does not disclose these two claim elements and turns to Redi. Redi discloses an electronic processor circuit [0017], which is not the same as the claimed link monitoring circuitry. The electronic processing circuitry in Redi determines path loss information, distributes information, and routes messages. Redi uses route quality information to determine the power level needed for transmitting information between nodes but not to determine the actual route path in a predictive process as in claim 1.

Regarding the claimed electronic processing circuitry, Kennedy uses node condition information received from node beacons to predict route stability over time and uses the predicted route stability to change between proactive and reactive route discovery processes. This is not the same as using the node condition information or the predicted route stability in a route determining process to determine which nodes that should constitute the route. Instead, Kennedy uses that information to change between different types of processes.

Similarly, for the claim feature "said predictive procedure uses said time varying information of link status in the predictive procedure," Kennedy uses time varying information to decide when to switch between a proactive and reactive route discovery process, i.e., to find a

value of a transition parameter that indicates the time to switch between the two types of processes. In contrast, the time varying information in claim 1 is used to actually determine a route path.

In summary, Kennedy uses route quality information to change between proactive and reactive route discovery process, which is different than using the route quality information to determine which nodes should constitute the route. Redi uses the route quality information to determine the power level needed for transmitting information between nodes—not for determining the actual route path in a predictive process as in claim 1. So even if Kennedy and Redi were combined for purposes of argument only, that combination lacks a teaching of using the route quality information to determine which nodes should constitute the route.

The application is in condition for allowance. An early notice to that effect is requested.

Respectfully submitted,

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